## Remarks

Prior to this Amendment, Claims 1-30 were pending in the present application. By this Amendment, Applicant has amended Claims 1, 14-16, and 28. No new matter was added by this Amendment. Applicant respectfully requests reexamination and reconsideration of the pending claims in view of the amendments and remarks contained herein.

### I.    Claim Rejections – 35 U.S.C. § 112, Second Paragraph

Claims 1-14 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. In particular, the Examiner alleges Claims 1 and 14 are indefinite because he is unsure whether the limitation "one or more instances of a document" is a new structure or relates to the "at least one instance of document" limitation also included in Claims 1 and 14. Similarly, the Examiner asserts he is unsure whether the limitation "each dynamic document structure" is a new element or relates to the limitation "one or more computer-processable dynamic document structures" also recited in Claims 1 and 14. The Examiner also states he is unsure whether the limitation "at least one dynamic document structure" is a new element or relates to the limitation "one or more computer-processable dynamic document structures" also recited in Claims 1 and 14.

Although Applicant believes these limitations are clear, to further prosecution of this application, Applicant has amended Claims 1 and 14 to further clarify these limitations. Accordingly, Applicant respectfully requests withdrawal of the 35 U.S.C. § 112, second paragraph rejections of Claims 1-14.

### II.    Claim Rejections – 35 U.S.C. § 102(b)

Claims 1, 12-13, 16-17, and 28-30 stand rejected under 35 U.S.C § 102(b) as being anticipated by United States Patent No. 6,006,242 (hereinafter referred to as "Poole"). As discussed below, Poole does not teach or suggest the subject matter defined by these claims.

#### i.    Independent Claim 1

The Examiner asserts Poole teaches "establishing a set of computer-processable rules in accordance with a rules markup language," as recited in Claim 1. As disclosed in Poole, a document developer manually specifies entity references for a particular document instance

based on the document developer's own knowledge of the business, legal, and/or governmental rules and regulations that govern a particular document (col. 5, lines 1-7). The entity references specified by the document developer are then resolved using catalogs (col. 19, line 9). In particular, the document generation system disclosed in Poole attempts to find a match between an entity reference specified by the document developer and an entity reference specified in a catalog (col. 6, lines 55-59).

As further disclosed in Poole, during the resolution process, an entity reference is read from a document instance and compared against entries in a catalog, which is stored in a knowledge base (col. 7, lines 49-51). As shown in Figure 5 of Poole, the catalog includes an entity reference and a reference to a document component (e.g., entity reference &1 is mapped to document component A) (Fig. 5). As disclosed in Poole, each document component can be linked to a business or government regulation source (col. 7, lines 37-41). Therefore, once an entity reference is mapped to a document component using the catalog, content from the regulation source is incorporated into a final document. For example, as shown in Fig. 5 of Poole, document component A is linked to section 1, paragraph 1, of regulation Z (Fig. 5).

In simple terms, Poole discloses defining a document structure including entity references. Each entity reference is mapped to a document component, which replaces the entity reference. A document component includes document content and may include links to additional content from a particular regulation source, such as sentences or paragraphs associated with a particular regulation. Therefore, Poole discloses creating a document structure including manually specified entity references and replacing the references with content from various sources.

Applicant continues to disagree with the assertions of the Office that either the business rules, government rules, or entity references of Poole are "rules" as claimed.

According to the Office, Poole discloses "configuring each rule in the set of computer processable rules . . . to be embedded in one or more computer-processable dynamic document structures" and points to the discussion in col. 5, lines 3-62; col. 6, lines 49-64, col. 7, lines 28-60 of Poole.

In the cited section of col. 5, Poole mentions that content is included in a document in

order to meet "government rules." In the cited section of col. 6, Poole describes authors creating documents that include entity references. Finally, in the cited section of col. 7, Poole describes the methodology in which entity references are resolved and by which content is incorporated into the documents.

The Office then concludes that the content included in the document follows the required rules and that since the content may reference a regulation that the rules are embedded in the document. With all due respect, the syllogism proffered by the Office fails and the Office takes the concept of giving a claim the broadest possible interpretation to an extreme – one which a person of ordinary skill in the art would not reach.

Claim 1 requires a set of computer-processable rules established in accordance with a rules markup language. There is no basis, whatsoever that a government regulation or rule, presumably written in English or some other human language, even if it exists as a text file such as a Word file, can be equated to a computer-processable rule that is established in accordance with a rules markup language. The Office has completely ignored the "rules markup language" requirement of the claim.

The claim also requires that each rule be configured so that it can be embedded in a computer-processable dynamic structure. Each rule determines the content to be included in at least one instance of a document which is generated from a computer-processable dynamic document structure. Finally, the content determination occurs when each rule is "executed, in a computer, based on the current transaction data set." It is simply not possible for a business or government rule to be "executed in a computer based on the transaction data." Government or business rules are simply text.

Regarding the entity references, while they are resolved, they are also not "executed, in a computer, based on the transaction dated. The entity references are discussed in greater detail below, but among other things, Poole notes that an entity reference is read and compared to entity identifiers in a catalog of entity identifiers. See, e.g., col. 2, lines 17-19 of Poole. As such, the entity identifiers are more akin to "links" or "pointers" than rules.

The Office also asserts that Poole teaches creating a computer implemented database and storing each rule in the set of computer-processable rules in the database and storing content in

the database.  The Office points to col., 4, lines 54-56 and col. 6, lines 15-48 of Poole for this

Applicant notes that the same rules that are introduced and defined in the third clause of the claim are the "rules" that are stored in the database.  So, if the Office says that the business or government rules of Poole correspond to the rules of the claims, the business or government rules of Poole must be store in the database of Poole.  Likewise, if the entity references are the rules, then they must be stored in the database.  The Office can not, however, choose one structure in Poole as corresponding to the claimed rules for one clause or portion of the claim and then choose different structure in Poole to correspond to the claimed rules for a different clause or portion of the claim, as the antecedent basis and subsequent reference to "the" rules in the claim is clear.

In the section of col. 4 of Poole relied upon by the Office, Poole indicates that the knowledge base includes document components, document type definitions, catalogs, rules and links.  In the section of col. 6 of Poole relied upon by the Office, Poole indicates that the "rules" stored in the knowledge base are "rules that dictate access and utilization of components."  So, while the word "rules" appears in the text, it is evident that the "rules" in the knowledge base are not business rules or government rules.  (It should also be apparent at this point that, as Applicant has repeatedly said, that the rules in Poole are in the knowledge base, not embedded in the document.)  As noted in col. 42, lines 26-45, of Poole the Inference Engine 300 load rules from the knowledge base.  As discussed below, it is the inference engine in Poole that executes those rules.

Poole indicates that the "business rules" that Office relies upon are associated with entity references.  The entity references are stored in an Entity [Reference] Dictionary.  As noted, one or more entity references are placed in a document by an author.  However, the business rules are not placed in the document.  Poole states the following:

> An Entity Browser, shown in FIGS. 11 and 12, is a tool that permits a user to navigate an Entity Dictionary 166.  The Entity Browser provides search and sequence functions . . . .  It also enables a user to access and modify the attributes of an entity, as well as the text of Content Entities.  **For entities that have rules expressed in an Inference Engine 28,** the Entity Browser connects to the editor of the Inference Engine 28.  The Entity Browser is a user's interface to entities when authoring alternate or additional text.  It is also used when the user is defining entities for user-supplied electronic forms. . . . . Control of the entity

> resolution process is further enhanced by permitting users, such as financial institutions and their branches, to author alternate text that contains entity references in addition to those initially provided to the users. The institution, for example, may wish to specify that the institution's Entity Dictionary 166 be searched before the branch's Entity Dictionary 166, or vice versa.
>
> Each entity is referenced to one or more business rules that describe the transformations required to respond to an entity resolution request. FIG. 6 shows the main classes of transformations or business rule types. A non-transformation, indicated by line 106, is an action that simply moves a string from some source to the Entity Cache 168. A simple transformation, as indicated by line 108, is an action in which data is altered in some way between the source and the Entity Cache 168. .

Col. 17, lines 17-42 of Poole (emphasis added). In light of the foregoing, it should be clear that the business and government rules in Poole are not embedded in a document structure and executed based on transaction data. The "rules" of Poole and their evaluation are shown in Figs. 19-26 and are used in the Inference Engine 28, as shown, for example, in Figs. 19-22 and the accompanying text. Again, these rules are outside of the document, not embedded in it.

Another assertion of the Office is that Poole discloses a dynamic document structure having a tree-architecture that is resolved into one or more instances of a document. The Office cites Fig. 1; col. 1, lines 15-20; Fig. 2, and col. 5, lines 54-60 of Poole. Fig. 1 illustrates the overall process of authoring and constructing a document using the Poole system. Fig. 2 illustrates an entity resolution process. The section of col. 1 relied upon indicates that that Poole's system relates to dynamic construction of a document. The section of col. 5 relied upon indicates among other things, that entity references are resolved and "typically organized as a **linearized** stream 40." Col. 5, lines 56-67 (emphasis added). Applicant notes that the only use of the word "tree" in Poole is with respect to the Audit Browser 280, shown in Fig. 18. Thus, the Applicant disagrees that Poole teaches a dynamic document structure having a tree-architecture because a linearized list is not a tree. Applicant directs the attention of the Office to block 34 of Fig. 1, which illustrates a linear list of entity references, blocks 62 and 64 of Fig. 5, and block 22 of Fig. 9C, all of which illustrate a linear list of entity references.

Finally, the Office indicates that Poole teaches resolving the dynamic document structure by executing one or more embedded rules to create a specific instance of a document. As should be apparent from above, the business and government rules of Poole are neither embedded in a

dynamic document structure having a tree architecture or executed based on the transaction data. The rules are outside the document in the knowledge base and processed by the inference engine.

In light of the above, the Applicant submits that the claimed rules do not correspond to the business and government rules disclosed in Poole. Applicant can also demonstrate that the even if the entity references disclosed in Poole are deemed to correspond to the claimed rules, that Poole does not teach or suggest the claimed subject matter.

Assuming for the sake of argument that the entity references disclosed in Poole are "rules" as recited in Claim 1, to teach the subject matter of Claim 1, Poole must disclose "configuring each rule...to be embedded in the at least one computer-processable dynamic document structure and to determine the content to be included in at least one instance of a document generated from the at least one computer-processable dynamic document structure when executed based on the transaction data set." Poole does not disclose such features. In other words, the alleged structures in Poole that, according to the Office, correspond to the claimed rules are not executed based on the transaction data.

In Poole, an author with knowledge of the entity identifiers and the content which is linked to each entity identifier creates a document. By using the entity identifiers and catalogs, a document author does not have to type (or write) in all the language for a document. He or she can use the entity references as a type of short hand. In addition, it is possible that a change can be made to the content associated with a particular entity reference and, from that point forward, the changed content is used whenever the associated entity reference is used by a document author. See, e.g., col. 6, lines 49-55 of Poole. However, the entity references disclosed in Poole only identify the content to be included in a document. Poole does not teach or suggest "executing" the entity references based on current transaction data to determine content to be included in a final instance of a document. In fact, once an entity reference is specified by a document developer, Poole does not disclose using or referencing current transaction data during the document construction process.

In that sense, using the system disclosed in Poole, even if two transactions have completely different transaction data, an identical entity specified by the document developer in each document will resolve to the same document content. However, in the current application,

an identical embedded rule included in a document structure for two completely different transactions, may result in different document content when executed based on the current transaction data. For example, as described in the present application, a sample rule may state "If applicable law state=NY, add NY consumer protection clause" (pg. 3, paragraph 9). Therefore, the rule examines the current transaction data (e.g., the state associated with a current transaction) when executing the rule to determine what content to include in a document. Providing such functionality allows each document structure to dynamically resolve into a document specifically tailored for a current transaction.

In Poole, the basic entity reference resolution is that the first match in a catalog is used. More complex matching can be accomplished but only by using an Inference Engine. The Inference Engine uses what Poole describes as "rules," but as noted these rules are extracted or loaded from the knowledge base and executed in the Inference Engine. They are not, as claimed in claim 1, embedded in the dynamic document structure. See, e.g., col. 20, lines 27-67 of Poole.

For all the reasons noted above, the rules disclosed in Poole whether they are business rules, government rules, entity references, or rules stored in the Knowledge Base are not equivalent to the rules in the set of computer-processable rules established in accordance with a rules markup language and "embedded in the at least one computer-processable dynamic document structure and to determine the content to be included in at least one instance of a document generated from the at least one computer-processable dynamic document structure when each rule is executed based on the current transaction data set," as recited in amended Claim 1. Similarly, Poole also does not teach or suggest "resolving, with a computer processor and in accordance with the current transaction data set, the at least one dynamic document structure by executing the one or more rules from the set of computer-processable rules embedded in the document content based on the current transaction data set to create a specific instance of a document in a static form," as also recited in amended Claim 1.

Accordingly, Poole does not teach the subject matter of Claim 1. Therefore, Claim 1 and Claims 2-13 that depend from Claim 1 are allowable. Similar rationale can also be applied to independent Claims 14, 15, 16, and 28 as amended and the claims that depend from these independent claims. Therefore, Claims 1-30 are allowable for at least the reasons set forth above.

### III.    Claim Rejections – 35 U.S.C. § 103(a)

Claims 2-11, 14-15, and 18-27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable in view of Poole and in further view of "XML in a Nutshell," Second Edition, authored by Harold et al. (hereinafter referred to as "Harold"). As discussed below, Poole and Harold, taken individually or in combination, do not teach or suggest the subject matter defined by these claims.

#### i.    Dependent Claims 2-11 and 18-27

As noted above, Claims 2-11 and 18-27 depend from independent Claims 1 and 16, respectively. Therefore, these claims are allowable for at least the reasons set forth above with respect to Claim 1. Harold, however, also does not solve the deficiencies of Poole.

Harold merely discloses standard elements and functions associated with the extensible markup language ("XML"). Although Harold may disclose means for establishing a set of computer-processable rules (e.g., the rules may be based on XML), Harold makes no mention whatsoever of establishing a set of computer-processable rules, which are embedded in documents and determine content included in an instance of a document when the rules are executed based on current transaction data. Accordingly, dependent Claims 2-11 and 18-27 are allowable for at least the additional reasons set forth above.

#### ii.    Independent Claim 14

As noted above with respect to Claim 1, Poole does not teach or suggest embedded rules that determine content included in an instance of a document structure when the rules are executed based on transaction data. Accordingly, Poole does not teach or suggest "configuring each rule in the set of computer-processable rules to be embedded in the at least one computer processable dynamic document structure and to define content to be included in at least one instance of a document generated from the at least one computer-processable dynamic document structure when each rule is executed based on the current transaction data set," as recited in amended Claim 14. Similarly, Poole does not teach or suggest "resolving the at least one dynamic document structure, with a computer processor and in accordance with the current transaction data set, by executing the one or more rules from the set of computer-processable rules embedded in the document content based on the current transaction data set to create a

specific instance of a document in a static form," as also recited in amended Claim 14.
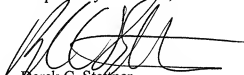
Harold does not solve the deficiencies of Poole. As described above with respect to dependent claims 2-11 and 18-27, Harold merely discloses the standard XML functions and elements. Harold makes no mention whatsoever of establishing a set of computer-processable rules, which are embedded in documents and determine content included in an instance of a document when the rules are executed based on current transaction data.

Accordingly, for at least the above reasons, Poole and Harold, taken individually or in combination, do not teach the subject matter of Claim 14. Therefore, Claim 14 is allowable. Similar rationale can also be applied to independent Claim 15 as amended.

### IV.    Conclusion

In light of the above, Applicant believes that the application is in condition for allowance and respectfully requests that a timely Notice of Allowance be issued in this case. Applicant also requests that the Examiner telephone the attorneys of record in the event a telephone discussion would be helpful in advancing the prosecution of the present application.

Respectfully submitted,

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